

Model 20.1:

Data Table

Sums of squares:

$$SSA = b \sum_{i=1}^a (\bar{Y}_i - \bar{Y}_{..})^2 =$$

$$SSB = a \sum_{j=1}^b (\bar{Y}_j - \bar{Y}_{..})^2 =$$

$$SSAB \text{ (error)} = \sum_{ij} (Y_{ij} - \bar{Y}_i - \bar{Y}_j + \bar{Y}_{..})^2 =$$

$$SSTO = \sum_{ij} (Y_{ij} - \bar{Y}_{..})^2 =$$

<u>ANOVA table</u>	<u>SS</u>	<u>df</u>	<u>MS</u>	<u>E{MS}</u>	<u>F</u>
Factor A					
Factor B					
“error”					
Total					

Test for factor A main effects:  $F^* = MSA/MSE =$

with p-value =

Test for factor B main effects:  $F^* = MSB/MSE =$

with p-value =

21.5(c) Confidence intervals (Pairwise comparisons of factor level means with Bonferroni family confidence coefficient .95) :

Since there are 3 comparisons, use  $B =$

Use  $s\{\hat{D}\} =$

Margin of error =

Confidence intervals:

20.6 (c) [ Hint:  $\sigma^2\{\hat{\mu}_{ij}\} = \frac{a+b-1}{ab} \sigma^2.$ ]

20.7 Tukey Test for Additivity